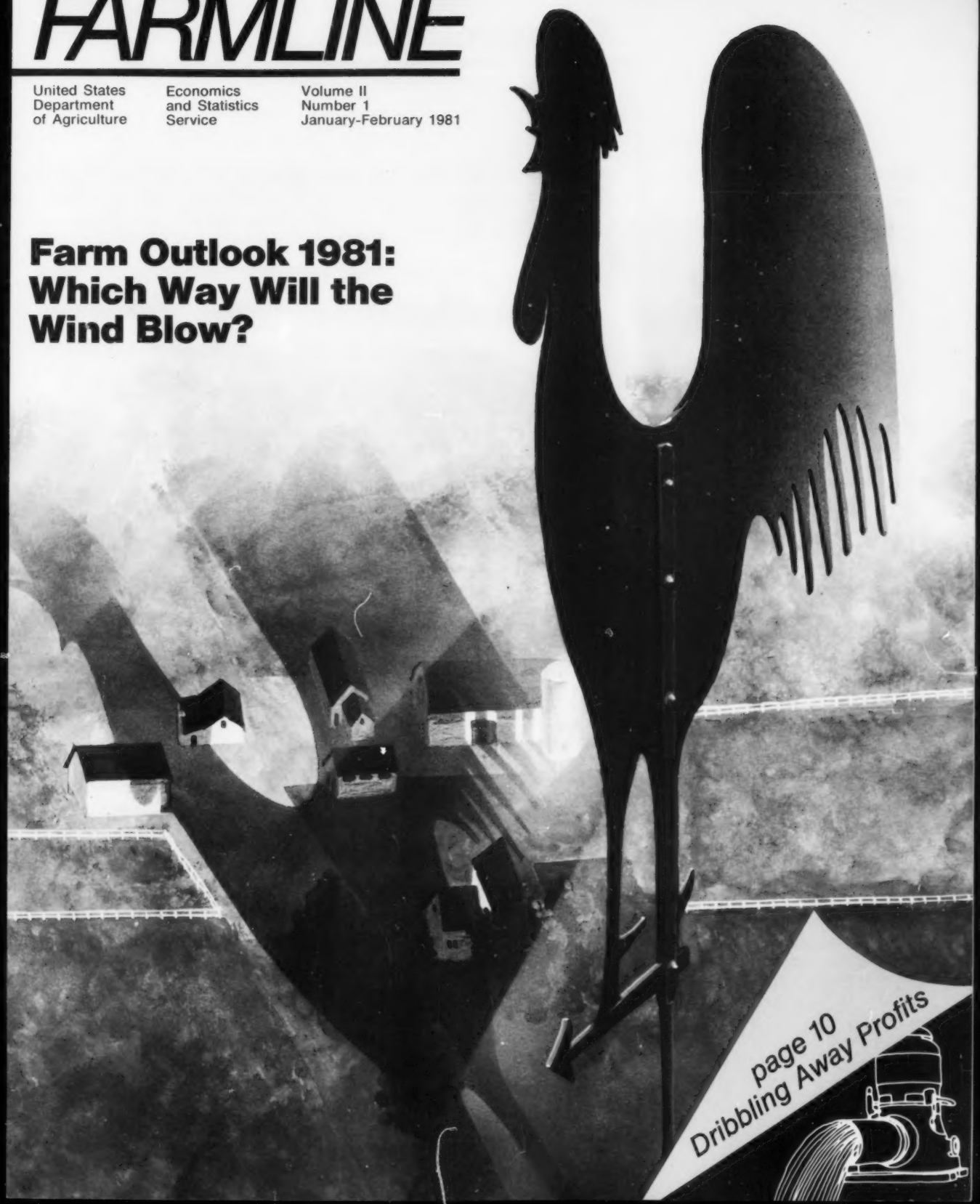
FARMLINE

United States Department of Agriculture

Economics and Statistics Service

Volume II
Number 1
January-February 1981

Farm Outlook 1981: Which Way Will the Wind Blow?



page 10
Dribbling Away Profits

Editor:
Eric Van Chantfort
(202) 447-8302

Assistant Editor:
William Gordon
(202) 447-8302

Editorial Assistant:
Martha R. Evans

Design and Layout:
Joan Bazemore
Carolyn Fletcher
Susan Yanero
Linda Zelder

Contents of this magazine may be reprinted without permission.

FARMLINE is published 11 times a year by USDA's Economics and Statistics Service and is provided free to *crop reporters* by the ESS crop and livestock reporting service office in each state.

Subscription price $10 a year ($12.50 foreign). Order from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Ask for *FARMLINE* and make your check payable to Superintendent of Documents. Address single copy requests and editorial correspondence to *FARMLINE*, Room 505 GHI Bldg., ESS, USDA, Washington, D.C. 20250.

The Secretary of Agriculture has determined that the publication of this periodical is necessary in the transaction of the public business required by law of this Department. Use of funds for printing this publication has been approved by the Director of the Office of Management and Budget through January 1, 1982.

Use of commercial or trade names does not imply approval or constitute endorsement by USDA or ESS.

Perspectives

Confidence runs deep that this will be a better year for agriculture than the last one. The 10% drop in 1980 crop output and strong export demand should keep crop prices well above last year's levels. Feed costs may prevent cattle and hog producers from avoiding red ink at least part of the year, but livestock prices should respond well to lower 1981 meat production and rising consumer incomes, particularly in the second half.

A repeat of last spring's credit crisis isn't foreseen, and interest rates should edge downward through the year. Production costs may still register another big jump, but --unlike 1980--overall farm receipts will rise even more. Result: Net farm income should rebound sharply from 1980's depressed $23-$25 billion.

Of course, much depends on what's ahead . . . Price moves in coming weeks will be tuned to weather and crop developments here and abroad--factors more crucial because of pinched world grain supplies. Odds favor a return to more normal U.S. weather, but forecasts are chancy and many areas are still very short on moisture.

Good sign: export markets are jumping . . . U.S. sales may hit a record $48.5 billion this fiscal year, up about 20% from last year's $40.5 billion. Credit higher prices for most of the gain, but volume should grow, too--perhaps by about 6 million metric tons, or 4%. Feed grain and wheat shipments are expected to rise, but volume may decline for soybeans, cotton, tobacco, and vegetable oils.

Winter wheat acreage tops the 1949 record . . . Farmers seeded an estimated 63.9 million acres last fall, up 11% from 1979 plantings. Even with slightly lower average yields, production should hit a new high--forecast at about 1.98 billion bushels, or 5% above last year's crop.

Florida freeze . . . Two nights of subfreezing weather hit growers in mid-January just as we went to press. From Orlando, USDA's Richard Small reported widespread internal icing in oranges and some damage to winter vegetables. Before the freeze, output of Florida oranges was pegged at 203 million boxes, down 2% from last season's record and about 75% of expected U.S. production. Freeze damage doesn't rule out use for processing, but yields may slip.

March 19 is "National Agricultural Day" . . . Congress made it official last fall. It's agriculture's chance to tell its story to lawmakers, news media, and consumers.

FARMLINE

Volume II
Number 1

January-February 1981

FEATURES

Farm Outlook 1981: Which Way Will the Wind Blow? by *Daniel R. Williamson* 4

Tighter supplies and strong demand, improved credit conditions, a healthy rebound in farm income—1981's early prospects are good news for producers, even though many still face cost squeezes in the year ahead.

Security Measures Cloak Crop Report Lockup by *William Gordon* 8

A combination of sophisticated electronics, steel locks, and armed guards protect USDA's monthly forecasts of crop production from leaks and tampering.

Is Excess Irrigation Dribbling Away Profits? by *Deborah Takiff Smith* 10

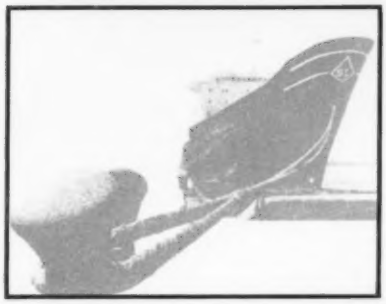
Many farmers in water-short areas may be dribbling away potential profits when they irrigate for maximum yields. According to researchers, less water and a lower yield often mean a higher profit.

Counting Up Shares in World Trade by *Barry Murray* 12

Who are the top exporters and importers of major commodities? Here's the answer, along with some key factors that will determine whether the U.S. remains dominant in the competition for world markets.

Supporting Dairy Prices: A Question of Balance by *Ellen Banker* 16

When legislation setting the current dairy price support level expires this year, Congress will face the question of how to balance conflicting concerns about dairy farmers' returns, consumer prices and federal spending.



DEPARTMENTS

Perspectives: Late-Breaking Agricultural News and Analysis 2

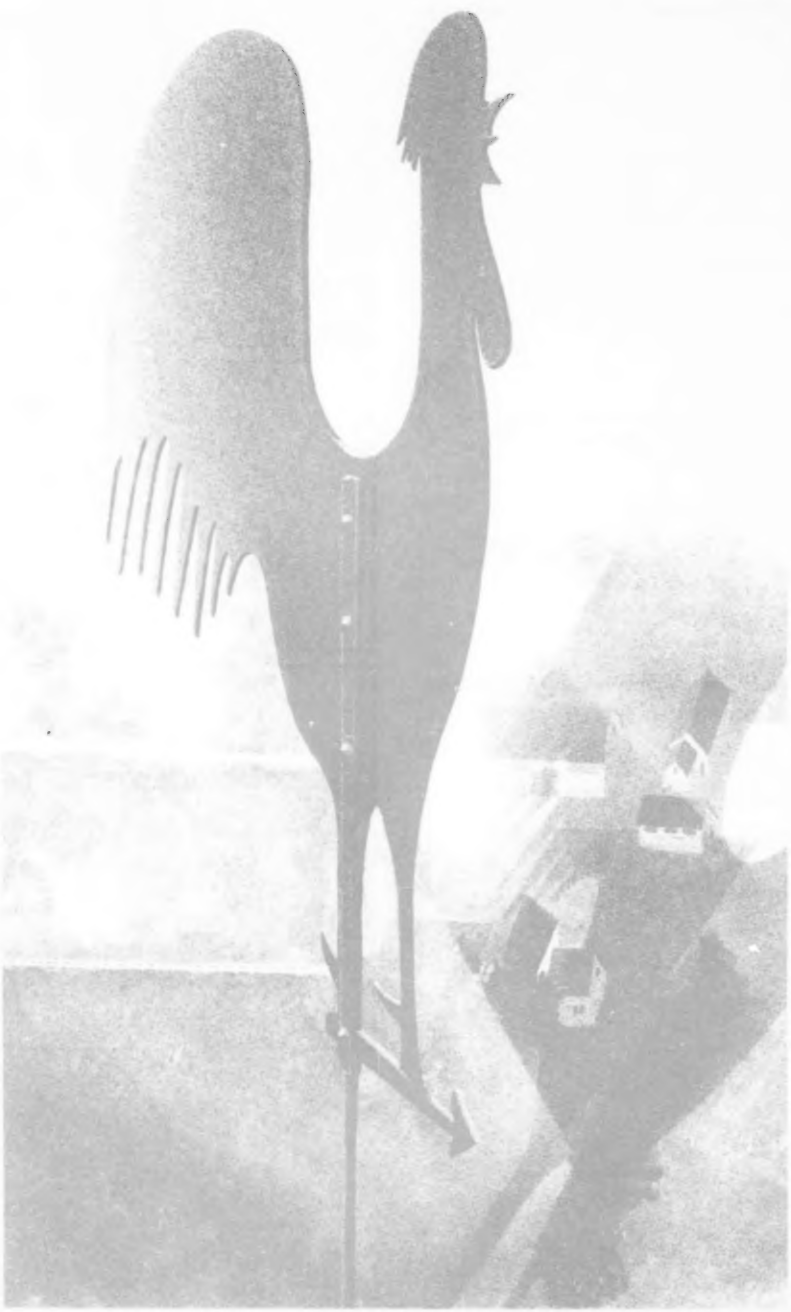
Agricultural Roundup: Volcanic Aftermath; What's Ahead in Weather? 7

World Update: Export Outlook; China's Prolific Pig 14

Reports in the News: Gasohol Prospects; New Chartbook 15

Farmline Trends: Monthly Price Monitor; Adding Up Export Earnings 18

Farm Outlook 1981: Which Way Will the Wind Blow?



American farmers should fare better this year than in 1980, as tighter supplies and strong demand push net farm income up as much as a fifth.

While that's good news to producers who endured 1980's arid summer and turbulent financial conditions, consumers may have to weather retail food price increases of 10 to 15 percent in 1981 on top of last year's 8.6 percent.

Farmers, whose net farm income fell from $31 billion in 1979 to $23-$25 billion last year, may see that bottom-line figure rise back up to 1979 levels this year, predicts USDA economist George Hoffman.

Hoffman bases this upbeat forecast on tighter supplies of most commodities—especially livestock—pushing up farm prices. Overall crop receipts are expected to average 6-10 percent higher this year, while livestock receipts could be up 15-20 percent. Last year, prices received by farmers averaged only 2 percent over 1979 levels.

Production expenses should be held to around a 10-12 percent rise—about the same as in 1980.

Production Costs Are Key

In looking at last year's relatively low net farm income, it's important to note that soaring production costs—not falling farm prices—caused the slippage. This year's boom in farm prices should cushion the impact of another big jump in production costs.

"Nearly all input prices are expected to increase," says economist Robert E. Olson, "but both long-term and short-term interest rates may decline from the 1980 average levels. This will affect estimates of production costs significantly."

Olson also stresses that per-unit production costs will be smaller if 1981 crop yields recover from last year's decline and rejoin the long-term trend of year-to-year increases.

Fuel and energy prices remain the biggest question among production in-

puts. Last year's 39-percent increase from 1979 not only took money out of farmers' pockets to run equipment, but also pushed up prices of chemicals and fertilizers.

This year, fuel and energy prices are expected to rise a fourth, but the estimate, of course, is vulnerable to events and decisions affecting supplies.

Improved Credit Conditions

While current interest rates are very high, a repeat of 1980's spring farm credit crisis is "extremely unlikely," declares economist Dean Hughes.

The money supply, interest rates, and general economic conditions this coming spring are uncertain and could strongly influence credit conditions in the farm sector. However, given the improved liquidity of agricultural banks, farm operating loans should be available this year, Hughes says.

The boom in farm prices should cushion another big jump in production costs.

Last spring, credit was extremely tight, especially in some locations. And to obtain an operating loan, many farmers had to pay better than 18 percent interest.

"If the Federal Reserve System follows a policy of moderate growth in the money supply," Hughes says, "interest rates will slowly decline through 1981."

Volatile World Food Situation

If the portents for 1981 look good for American farmers, many experts remain concerned that the low production in 1980 has left world food and fiber stocks virtually depleted.

Worldwide, supplies of agricultural products are tighter than they've been since the early 1970's, with grains, oilseeds, sugar, cotton, and animal product supplies all declining.

J. Dawson Ahalt, Chairman of USDA's World Food and Agricultural Outlook and Situation Board, says world grain stocks could drop from 191 million metric tons at the beginning of this marketing year to 152 million metric tons at season's end—the largest drawdown since 1972.

"Though the present world grain situation means higher prices, it does not suggest widespread food shortages," Ahalt stresses. "The food grain situation is not nearly as tight as that for feed grains."

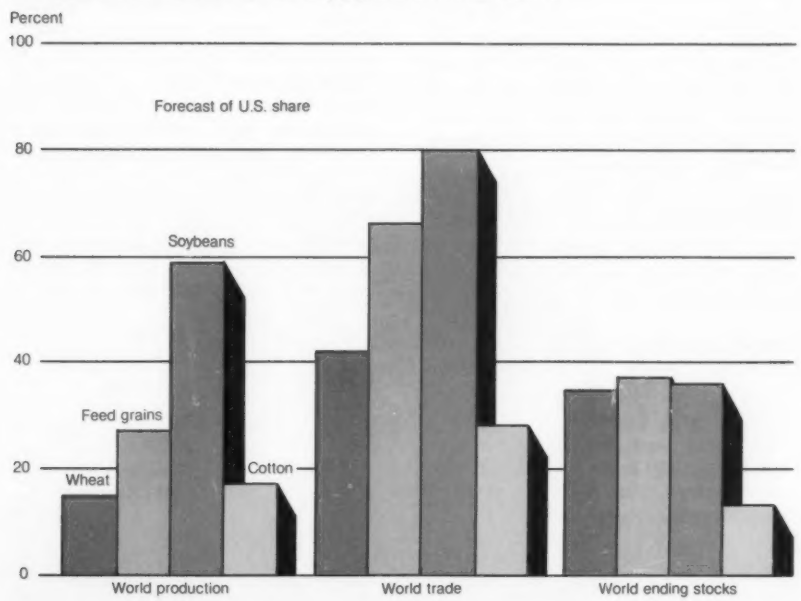
But Ahalt, like other experts, worries about this year's harvest. "The danger looms that disappointing harvests worldwide again this year would lead to widely fluctuating prices and perhaps serious food shortages in some areas of the world.

"The fact that we face such a prospect just 2 years after accumulating our largest global stocks of grains in over a decade underscores the continued fragility of the world food situation—that the balance between too much and too little food can tilt easily, and rapidly, from one direction to the other."

The tightening supplies will also affect U.S. consumers, with the retail food price rise likely to exceed 1980's 8.6-percent increase. If the rise reaches the upper point of the projected 10-15 percent forecast range, it would mark the highest annual increase in retail food prices since 1947, says USDA's Paul Westcott.

While the farm economy, as a whole, should improve this year, some producers will do better, as a group, than others.

1980 U.S. Harvest Vital in World Supply and Demand Picture



Depleted Feed Grain Stocks
Feed grain stocks are so depleted by the 1980 drought and strong domestic and foreign demand that just about everyone has a stake in how well U.S. producers do with 1981 crops. U.S. corn and sorghum farmers are in a strong market position.

It's easy to see why the situation is tight. U.S. feed grain production in 1980 totaled 192 million metric tons of corn, grain sorghum, oats, and barley—a drop of 42 million from 1979. The new marketing season started last fall with a relatively large carryover of 52 million tons from the 1979 U.S. crop, but supplies are still down more than a tenth from last year.

Prospects call for domestic use of 150 million tons and exports of 74 million through September 30, 1981. That could leave stocks of just 21 million tons before the 1981 harvest.

U.S. crop developments this year will greatly determine world feed grain stocks and prices, says Paul Meyers.

Prices are expected to be up sharply, with corn averaging $3.35 to $3.75 this year compared with $2.50 per bushel last year, and similar increases for other coarse grains.

Strong Wheat Demand
Last year, U.S. wheat producers harvested a record 2.4 billion bushels, and the quality was the highest in years, declares economist Bruce H. Wright.

Nevertheless, current tight world food grain supplies should mean strong farm prices in the $3.95 to $4.25 range this season—up from last season's $3.82 per bushel. Worldwide demand is being stimulated by poor crops in the Soviet Union, Australia, India, and China.

Higher Soybean Prices
The 1980 U.S. soybean harvest was down almost a quarter from the previous year, yielding only about 1.77 billion bushels.

Feeder cattle producers can expect a sharp improvement in returns as spring grazing begins.

Economist Jim Matthews says that large carryovers from earlier crops restrained price increases, but farm prices are still expected to average $7.35 to $9.85 a bushel this season, up from $6.25 a year ago.

Beef Cattle Off To Fast Start
Cattle prices should get off to a fast start this spring as the grazing season begins and nonfed cattle slaughter declines—keeping a step ahead of rising feed costs to give feeders "much needed increases in their profit margins," predicts livestock analyst Ron Gustafson.

Feeder cattle producers can expect a sharp improvement in returns as spring grazing season begins—a development that may cut into cattle feeders' profits next fall. That's when these feeder cattle placed on feed during the spring at higher prices will be marketed from feedlots.

Choice grade fed steers at Omaha may average in the high $60's in the first quarter, rising to near $80 in the spring and staying near that level for the rest of the year. But production costs are expected to continue rising.

By late summer and fall, feeding margins may narrow or even fall into the red unless feeder cattle prices are held down, or unless 1981 grain crop prospects dampen feed prices.

Hog Prices To Strengthen
Last year, many hog producers suffered large losses after very sharp early season farm price drops. But producers did much better in the second half—especially those who bought their feed before the summer drought boosted grain prices.

Prices will strengthen as pork production declines throughout 1981, perhaps averaging around $46 per cwt. in the first half. In the second half, prices may edge into the mid-$50's.

Cost Squeeze On Poultry
Poultry and egg producers can expect higher prices this year, even with larger broiler and turkey supplies, says USDA's Allen Baker.

Broiler prices may increase 14-16 percent, while turkey prices rise 5-7 percent. However, higher feed costs may keep producers from showing a profit until the second half of 1981.

As for eggs, if producers reduce output during the first half of this year, 1981 prices should be much stronger than last year's, perhaps averaging 76 to 78 cents a dozen in the first half, and 79 to 81 cents in the second.

Dramatic Decade Ahead
While each American farmer has a special stake in short-run commodity prospects, many economists see dramatic changes coming as the 1980's unwind.

"Meeting the production and trade challenges of the 1980's implies serious adjustments in U.S. agriculture," said Howard W. Hjort, USDA's Director of Economics, Policy Analysis and Budget.

"If U.S. production is to meet projected growth in export demand as well as increases in domestic demand, our agricultural plant will have to operate closer to capacity than ever before."

Agricultural Roundup

More Smoke Than Fire in Volcanic Threat

When Mount St. Helens erupted last May, it was widely feared that the dust fallout would damage crops in the northwest, especially in Washington. The fears proved unfounded. In spite of the heavy dust, Washington had bumper winter and spring wheat crops, with the highest per-acre yields since the state started keeping records in 1909.

None of the state's other major crops were hurt either. The apple crop was bigger than in 1978 and 1979. So was the hops harvest. Pasture and range feed conditions, in the good to excellent range, are rated the best in a decade.

James Kitterman, USDA's state statistician in Washington, reports that some observers believe the dust may even have contributed to the success of this year's crops. They suggest that the layer of dust insulated the soil, slowing evaporation of critical moisture, but Kitterman says there's no way to determine if this really happened.

Also, significant quantities of micro-nutrients, such as magnesium, have been found in the ash. Researchers say these nutrients should enrich the soil enough to benefit future crops.

The only apparent problem caused by the dust was at the first cutting of the state's alfalfa hay. Cutting blades had to be raised higher than normal to keep the abrasive dust that clung to the grass from clogging equipment. Also, some newly planted fields of dry edible beans were buried under the dust and had to be replanted, but there were no lasting effects on the crop.

The eruption's impact on transportation also proved to be minimal. There was a brief threat to shipping on the Columbia River when it began to silt up with the volcanic ash, but dredging operations have been completed, and the river is navigable.

What's Ahead for Weather

What's the likelihood of an even smaller grain crop this year? No one says it can't happen, but the U.S. hasn't had two consecutive declines in grain production in two decades.

The chance of corn yields slipping more than 10 percent below trend this year is only about one in twenty, meteorologists claim. Bad weather slashed 1980 corn yields about 20 percent below trend.

Despite the optimism, experts say that southwestern parts of the corn-soybean belt will need above-normal precipitation to replenish soil moisture before spring growing season is too far along.

In contrast, even less than normal rainfall in many northern and eastern parts of the belt could cause excessive moisture and hinder fieldwork this spring. Thus, corn and soybean producers probably won't be able to avoid moisture problems of some kind or another.

Major winter wheat areas will also need good rainfall to rebuild subsoil moisture necessary for spring growth. In Montana and the Pacific northwest, however, soil moisture appears good.

For spring wheat, only a few small areas still show below-normal moisture, thanks to abundant rainfall since midsummer. Even with light winter precipitation, soil moisture should be in good supply.

Cost of Production Survey

What does it cost to produce cattle, hogs, and sheep?

USDA interviewers will ask more than 6,500 livestock producers and feeders in 36 states for an hour of their time in March to answer questions about their cost of production and other characteristics of their operations.

Cost of production surveys for livestock are conducted by USDA every 5 years, with the data updated between survey years through a computer-based estimating procedure. The surveys provide cost of production budgets for different size operations in each region of the country.

The data are summarized each year in a special report to the Senate agriculture committee. The report provides lawmakers, farmers, and ranchers with information on annual costs and returns to different types of operations. (See last August's *FARMLINE* for a report on 1980 cost of production estimates for cattle feeders, cow-calf producers, and milk producers.)

The information supplied by the farmers is also used to update the national inventory of equipment, facilities, tractors, and trucks, and to analyze the structure of the operations: livestock replacement rates, births and deaths, average sales rates and labor required.

Information obtained from individual producers is strictly confidential. The interviewers, who live and work in the local survey areas, are trained enumerators of the various state Crop and Livestock Reporting Services. Farmers should be able to answer their questions, except those dealing with expense items, without going to their records, as most of the questions will deal with farm production practices and technology.

The survey sample will include 3,700 beef cow operators in 36 states, 1,800 hog producers in 18 states, 700 sheep producers in 13 states, and 300 farmer-feeders in five states. Large commercial feedlots will be surveyed later.

Watch future issues of *FARMLINE* for survey results.

Security Measures Cloak Crop Report Lockup

A combination of sophisticated electronics, locks, and guards help USDA statisticians protect their monthly forecasts of crop production from leaks and tampering.

Because of the importance of the figures—and their potential for abuse—security procedures usually associated with military intelligence are used from the first inspection of the data in the field offices to 3 p.m. on the day the information is released by the Crop Reporting Board in Washington, D.C.

When the forecasts are carried out of a locked corridor to a release room, news reporters rush to phones and relay the estimates to their wire services, newspapers, and broadcast stations. From there, they're flashed across the country and to many parts of the world.

The ability to influence the figures—or even to get advance access—could be good as gold to a commodity speculator, foreign competitor or customer, or anyone else with a large stake in the prospective size and price of the U.S. crop.

Objective Information

The manipulation of data and special advantages are just what the crop reporting program is designed to prevent. Farmers, for whom the figures are really intended, often make decisions on planting, storing, purchasing, and marketing based on the USDA estimates.

As the sources of much of the information, farmers need to be confident that the figures haven't been tampered with and that other interests aren't getting the information first, according to Charles Hudson, in charge of security for the Crop Reporting Board.

Everyone involved with the data used in the estimates, from those who conduct the surveys to typists, must sign statements of confidentiality, and all are forbidden to speculate in commodities. Stiff fines and imprisonment await the violator.

Precautions begin with the first field interview of a farmer about the condition of a crop and its probable yield. Survey enumerators contact farm units identified on aerial photos of hundreds of randomly selected square-mile segments. Crop acreage for every field within each segment is recorded.

Another survey involves objective yield counts—field enumerations based on plant counts and measurements in sample plots (for corn, a two-row section, 15 feet long) of preselected fields within the random segments. These data and actual samples of the crop are translated into yield forecasts for the area through mathematical models.

Double-Locked Box

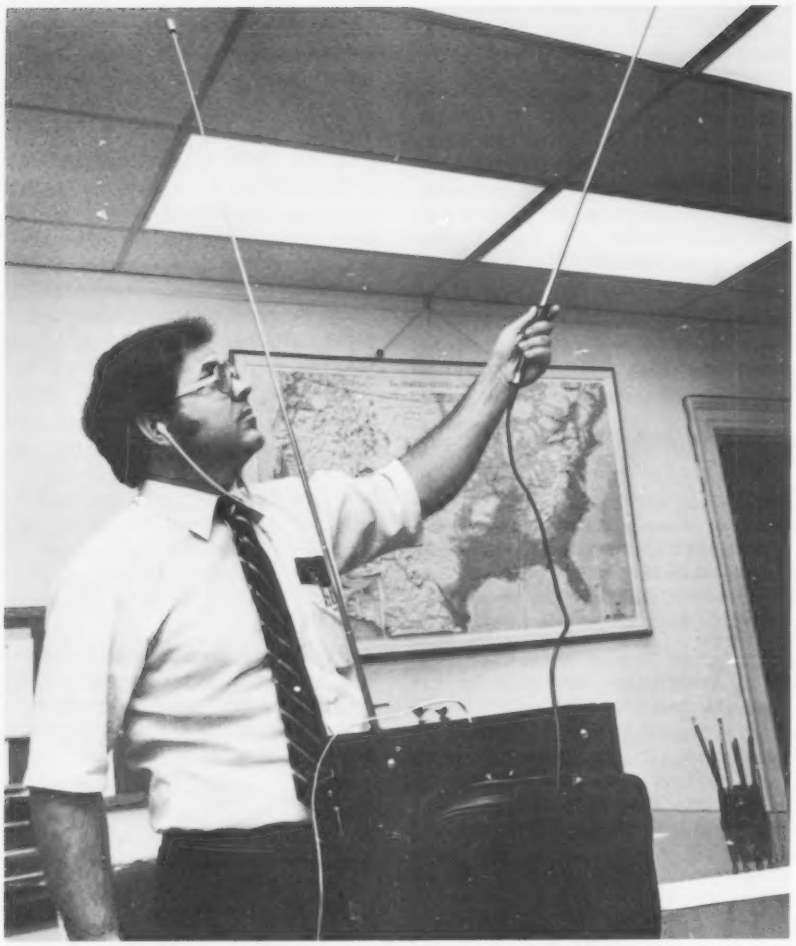
The results of the interviews, the objective yield counts, mail questionnaires, and telephone inquiries are evaluated at the state statistical offices. State indications of crop output are then sent in envelopes requiring special handling by the Post Office to the Crop Reporting Board in Washington, D.C., where they are processed under tight security. For highly speculative commodities, the data are immediately put unopened into a double-locked steel box until the scheduled release date.

On the release date, the box is unlocked by representatives from the office of the Secretary of Agriculture and the Crop Reporting Board (the only people with keys). The summaries are taken under armed escort to a specially equipped corridor that, when the board meets, is sealed off with double-locked doors and guards. All telephone lines are disconnected, and special rigid shades are drawn and sealed to prevent tampering.

Before the state summaries are opened and examined, board members are totally cut off from the outside. This is known as the "lockup." The board starts reviewing the state summaries as early as 3 a.m. during the late summer months, when most major crops are estimated, in order to make the 3 p.m. release deadline.

Entry into the lockup area is restricted to those with valid passes, and anyone who enters must stay until 3 p.m. The full lockup procedures are used only with those products traded on the com-

Anyone who enters the lockup must show a pass and remain until the information is released.



Charles Hudson listens for hidden transmitting devices, ensuring that no crop information leaves the lockup.

modities markets which have been designated as "speculative crops" (wheat, corn, soybeans, cotton, and Florida oranges).

Before the board meets, Hudson "debugs" the corridor where the final estimates are being prepared. The detector that he uses automatically locks onto the strongest signal in the area—normally a commercial radio station. If a secret signaling device in the locked corridor were turned on, the detector would instantly pick it up. "As long as I hear music, everything's okay," Hudson says.

While he is checking the board room, the state summaries go through statistical checks elsewhere in the guarded area. The equipment used to process the data is "tempest-tested"—equipped with devices that scramble any electromagnetic impulses that may escape. Even the electric typewriters have special motors. Otherwise someone with the right equipment could "read" the electric signals from outside the building.

Random Checks

Hudson continues to randomly sweep the corridor during the lockup, making it impossible for a potential information thief to establish a pattern. Also, since it's possible to attach signal devices to the clothing of others without their knowledge, Hudson turns the detector on when the representative from the Secretary's office (occasionally the Secretary) comes into the meeting to sign the estimates.

Hudson is confident that the measures effectively discourage attempts to beat the system. "Anyone who tried to send out information would almost certainly be caught," he says.

The security may seem a bit dramatic, but it's there for a good reason. Around the turn of the century, one person signaled information to a crony outside the building by raising and lowering the shades according to a preset code.

The conspirators were caught, but this incident convinced the board to take precautions, leading to the practically foolproof system today. Since then, no other breaches of security have been detected.

Sometimes innocent people are caught in this security net, such as a delivery man who recently entered the lockup, only to find that he couldn't leave or even telephone his company until after 3 p.m.

Still, the measures must be this strict, and applied without exception. Only if the information is absolutely secure can farmers be expected to support the survey program and have confidence in the information it provides.

Is Excess Irrigation Dribbling Away Profits?

Many farmers in water-short areas may be able to make more money by pumping less water onto their crops.

The reason, say USDA economists Harry Ayer and Paul Hoyt, is that they're draining away potential profits along with groundwater supplies when they irrigate their crops to get the highest possible yield.

According to the researchers, less water and a lower yield often mean a higher profit.

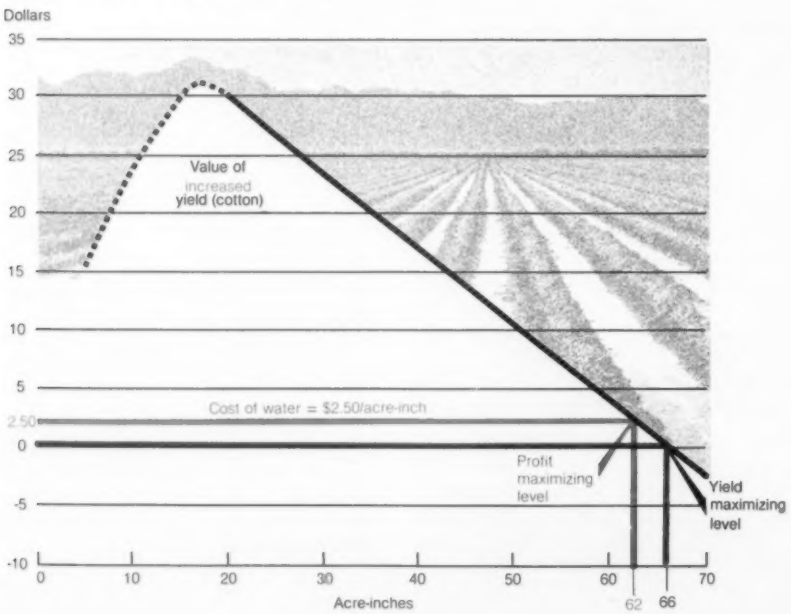
After a certain amount of water is applied to any crop, a point is reached where any additional water results in an increasingly smaller improvement in yield per acre. That's the law of diminishing returns.

To maximize profits, a producer should apply water only until the costs associated with adding the last increment of water match the value of the extra yield gained through the added water application. Any irrigation beyond that level starts cutting into profits, even though it may result in a further improvement in yield.

Of course, the amount of irrigation offering maximum profits varies for different crops, soil types, climates, lift depths, and prices of water, energy, and crops.

Less Water Can Mean Higher Profits

After a certain point, the value of the increased yield will begin to decrease with each additional acre inch of water. The level at which profits are maximized is where the increased value matches the cost of adding the next acre inch of water ($2.50). That level will be 62 acre inches in this case. As more water is added, higher yields will result—although profits will be lower—until the yield-maximizing level is reached at 66 acre inches. The spread between these levels will be greater at lower cotton prices. Figures in this chart are for cotton (lint and seed) at 65 cents a pound, in medium soil, with water at $2.50 per acre inch, and are based on studies done in Arizona. They will vary in other regions, with other crops, and with cost of water.



Climbing Water Prices

The traditional practice of applying enough water to ensure maximum plant growth and yield developed when the farm price of water was very low. Under those circumstances, profits were at or near their maximum when yields were at their highest.

The custom has been encouraged by both private and public irrigation management services. However, two developments—the rapid rise in energy prices in recent years and evidence that certain groundwater aquifers are being depleted—are changing the basic economics of water management in parts of the west.

Arizona, where the economists conducted much of their research, illustrates the possibility of cutting water use per acre while increasing farm profits. Like several of its neighbors, the state is using groundwater much faster than the water tables are being replenished.

Agriculture consumes more than 85 percent of the total water used in Arizona, but growing competition from industrial and residential use is putting increasing pressure on water supplies.

About half of the state's cropland is irrigated with groundwater, and nearly 60 percent of this acreage is pump irrigated from depths of 300 feet or more. As energy rates rise, the water is becoming more and more expensive to pump.

Irrigation costs typically account for almost a third of all farm operating expenses in pump areas. Annual electricity bills run $25,000 or more for medium size (500-acre) farms in many parts of the state.

Cheaper Surface Water

In their study of several counties, Ayer and Hoyt found that at relatively low water prices of about 50 cents per acre inch (a typical cost for surface water), there was virtually no difference between the profit and yield maximizing levels of irrigation for Arizona cotton,

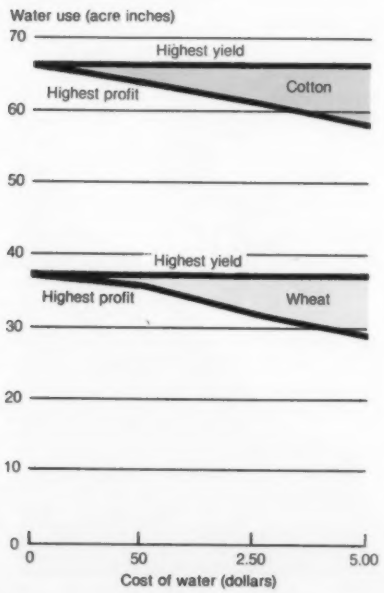
wheat, or sorghum. Much of Arizona farmland is irrigated with inexpensive surface water.

However, at water prices of $2.50 per acre inch (the estimated cost for water pumped from average Arizona depths), the maximum profit for all three crops at 1979 crop prices was reached with at least 4 fewer acre inches of water than the maximum yield level. Profits were also improved—many cotton farmers, for example, could have reaped an additional $5 per acre.

At high water prices of $5 per acre inch (for water pumped from a 600-foot depth), water savings were 8 or more acre inches. Profits were higher, too.

In general, the researchers concluded that wherever water prices were medium to high, water applications could frequently be cut 6 acre inches (one normal irrigation) or more on cotton, wheat, and sorghum grown in a variety of soils under a wide range of crop prices.

Profit Maximizing Strategy More Crucial at Higher Water Costs



The result: More than 144,000 acre feet of water a year could be saved in Arizona by reducing applications on the three crops to the maximum profit—rather than maximum yield—level. This represents only about 3 percent of total farm use of water in the state and it probably wouldn't be enough to avoid other conservation measures, but it's still a large amount relative to urban needs.

For example, that much water could satisfy all the municipal-industrial needs of Tucson—a city of nearly a half million—for about 2 years. At the same time, the 144,000 acre feet of water savings could add about 1 to 2 percent to producers' profits, even after accounting for about a 2 percent drop in crop yields.

The profit maximizing approach to irrigation applies not only to Arizona, but also to other areas where farmers are drawing water from sources with high pump lifts (200 feet or more), where sprinkler systems rather than gravity flow systems are used to deliver water to the fields, or anywhere else where water costs are a major part of farm expenses. This includes parts of California, Texas, New Mexico, Idaho, Washington, Nevada, Colorado, Nebraska, Oklahoma, and Kansas.

No Capital Outlays

While the profit-maximizing approach alone can't meet all the needs for conservation, it has one big advantage: no major investment. Although greater management time and skill are necessary to adopt more efficient irrigation scheduling, it's one approach that doesn't require additional capital outlays—unlike lining irrigation canals or buying a more efficient irrigation system.

So why isn't this low-cost, profit-boosting approach to irrigation in wide use?

Along with resistance to change, a major reason is the risk associated with reducing water applications. Little is known about how crop yields respond when water is withheld at different stages of plant development in different areas.

Sometimes, farmers intentionally overirrigate in order to keep ahead of the plants' water requirements. This provides a margin of safety in case of an irrigation system breakdown or in case severe weather causes the crop to need more water than can be quickly provided.

However, even with these risks, many farmers might be able to take advantage of the opportunity to both increase profits and conserve water if more information were available.

Most agronomic research has concentrated on the amount of water needed to obtain the highest yield. Ayer and Hoyt argue that the perspective should change from one of engineering efficiency where output is maximized to one of economic efficiency where profit is the priority.

They recommend that future experiments focus on how crop yields respond to stress so that public and private irrigation management specialists can advise producers on the levels and scheduling of irrigation that will provide the most profit.

Counting Up Shares in World Trade

As many nations strived to upgrade diets, the value of world agricultural trade climbed from $51.6 billion in 1970 to $199 billion in 1979. Trade volume increased 44 percent.

Over the same period, the U.S. share of world agricultural trade, by value, increased from 14.3 percent to 18.2 percent.

USDA economist Alan Webb attributes our success to the popularity of five major products—soybeans, coarse grains, wheat and flour, cotton, and rice. Together, they account for about 63 percent of U.S. export value.

These five big performers should continue to be the mainstays of U.S. agricultural exports, but prospects for future growth depend greatly on expansion in foreign demand, the availability of supplies, and U.S. price competitiveness in foreign markets.

Foreign Soybean Exports Up

International trade in soybeans has more than quadrupled in the past 20 years. Webb points out that the U.S. trade share, averaging about 90 percent in the late 1960's and early 1970's, has dropped to around 80 percent since 1975, even though export volume has continued to grow.

This is the result of increased world demand being met by expanded production and exports from Argentina, Brazil, and Paraguay. In 1979, Argentina ranked second to the U.S. with an 11-percent share of the export market. Brazil was next with 3 percent.

The major customers for soybeans have traditionally been the European Community (EC) nations, with a 48-percent share of world imports, and Japan, with 19 percent. Soybean purchases by both the EC and Japan have risen steadily since the 1960's due to the absence of import restrictions, high prices for alternative feed concentrates, and increased demand for meat.

According to Webb, continued U.S. dominance of the world soybean export market will hinge on four factors:

- Area expansion. If foreign soybean producers—especially Brazil, Argentina, and Paraguay—expand the acreage planted to soybeans, the U.S. share of the market could drop further. Area expansion in the U.S. is not likely, since it would come at the expense of cotton or corn, also in high demand on world markets.

- Exchange rates. The volume of soybean exports partially depends on exchange rates for the U.S. dollar and currencies of major importers. As the international value of the dollar declined in recent years, foreign currencies were able to buy more U.S. goods.

- Expansion of trade in other oilseeds. Improved varieties and increased supplies of other oilseeds and protein meals could substitute for soybean meal in livestock feeds.

- Change in trade policies. If Japan and the EC adopted trade restrictions, it would greatly reduce the amount of soybeans traded on world markets.

Coarse Grains Market Strong

Expansion of coarse grain production—especially corn—in response to lucrative grain prices enabled the U.S. to increase its share of the world market from 45 percent in the 1960/61 crop year to 67 percent in 1979/80, while the combined share of our major competitors fell from 33 percent to 26 percent. In 1979/80, corn accounted for nearly 70 percent of total world coarse grain trade, followed by barley at 16 percent and grain sorghum at 12 percent.

At the time when the U.S. was increasing coarse grain production, many other exporting nations—South Africa, Thailand, France, Canada, and Australia—lacked the area for crop expansion or were hindered by inadequate transportation and storage facilities.

The rapid rise in the volume of international coarse grain trade over the last decade is partly the result of rising incomes in Japan, Western Europe, and many developing countries. Also instrumental were Soviet and Eastern European policies to increase livestock and poultry production.

Webb says that if U.S. growers are to maintain their dominant share of world coarse grain trade these factors will play a vital role:

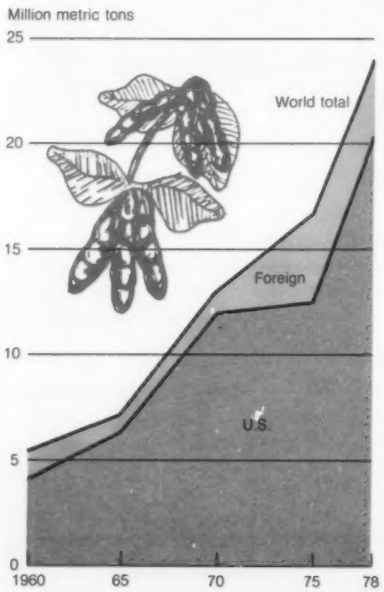
- Technology and management. Production gains will have to come from increased yields, because the acreage expansions of the 1970's are no longer possible.

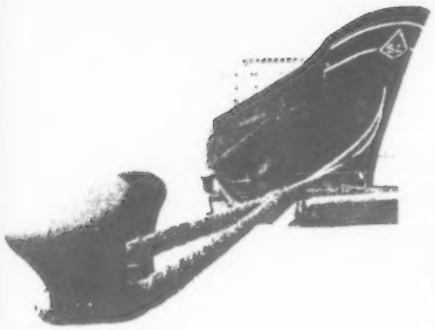
- Argentina's ability to improve its transportation and port facilities, and Thailand's increased use of fertilizer and other inputs to raise yields.

- Future Soviet grain production and import policies.

- The rate of increase in real incomes, especially in centrally planned and middle-income developing countries.

U.S. Soybean Exports Set Pace for World Trade





U.S. Holds Wheat Market Share

The U.S. is the world's largest wheat exporter, averaging 41 percent of the market since the 1975/76 crop year. Canada is next with 18 percent of the world market, Australia has 12 percent, and France 11 percent.

The U.S. market share dropped to under 35 percent in the late 1960's and early 1970's from a high of 42 percent in 1960/61. However, the Soviet wheat purchase of 1972/73 and subsequent sales pushed up the U.S. share to the current level.

In 1960/61, the leading wheat buyers worldwide were the EC (taking 27 percent of world imports) and India (taking 9 percent). However, both have increased domestic production and their purchases have fallen to 15 percent for the EC and only 3 percent for India, Webb says.

At the same time, the Soviet Union and Africa (particularly Egypt), which each bought only 1 or 2 percent of world wheat in 1960/61, now buy 10 to 15 percent each.

The U.S. should be able to capture a larger portion of trade if developing countries—particularly in Africa—buy more wheat for their growing urban populations.

However, increased competition on world markets could come from Australia, Argentina, and Canada as they improve their transportation and port storage capacities.

U.S. Leads in Cotton

Eight nations account for nearly three-fourths of world cotton exports. Since 1975, the U.S. has had the largest average share, 28 percent, followed by the Soviet Union with 21 percent and Turkey with 6 percent. The U.S. share dropped from 40 percent in 1960, while the Soviet Union more than doubled its share. During this time world cotton trade has risen slightly over 1 percent a year.

The leading purchasers since 1975 have been Japan with a 17-percent share of world imports, China with 9 percent, and South Korea with 6 percent.

Since the 1960's Asian nations—China, South Korea, Taiwan, and Hong Kong—have increased their cotton imports to supply growing textile industries. Meanwhile France, Italy, and Germany have purchased less cotton as synthetic materials have become more important.

Webb cites several conditions that will affect U.S. cotton prospects:

- U.S. export supplies. U.S. farmers must continue producing enough cotton for export.
- Exports by competitors. Several exporting nations, such as Mexico and Egypt, may shift land from cotton to food production. However the USSR should remain a strong competitor, considering its plans for increased cotton production.
- Foreign demand. Increasing incomes and populations—particularly in China, Brazil, and Egypt—may increase demand for cotton textiles.
- Synthetic fibers. Although world cotton trade slowed in the 1970's because synthetic fibers became cheaper than cotton, the spiraling cost of petroleum (a major component of synthetic fibers) should make cotton more competitive.

Balanced Rice Market

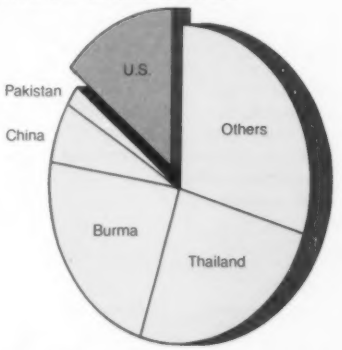
As with cotton, no single country dominates the world rice market. This is primarily because consumers in different nations have developed a preference for rice with certain taste, texture, and cooking characteristics. Webb notes that people in many Asian countries prefer short grain rice, while Europeans favor long grain.

Since 1960, the U.S. has moved from being the third leading rice exporter, with a 13-percent share of the world rice market, to join Thailand in the top position. Since 1975, each has averaged a 21-percent share, followed by China at 11 percent, Pakistan at 9 percent, and Burma at 5 percent.

Rice importers are spread around the world. Since 1975, Asia has purchased 42 percent of world imports; Africa, 15 percent; Western Europe, 11 percent; Latin America, 4 percent; and Eastern Europe, 2 percent.

U.S. Expands Share of World Rice Exports

1960 volume = 6.5 million metric tons



1975-79 average volume = 10.6 million metric tons

World Update

Closing In on $50 Billion

Overseas sales of U.S. agricultural goods are expected to reach around $48.5 billion in fiscal 1981, a 20-percent increase over last year's $40.5 billion. That would make this year the 12th in a row in which our farm exports have set a record value.

Higher product prices—due to the drought-reduced feed grain, oilseed, and cotton crops—will probably account for about 80 percent of the value rise. Export volume should increase only about 4 percent to a record 170 million tons.

Of the major commodities, feed grain shipments are expected to increase about 3 million tons to 74 million, while wheat exports may rise 4 million tons to over 41 million.

Cotton exports, which showed the biggest increase of any U.S. crop last year, will decline sharply because of reduced supplies, resulting higher prices, and a weak world economy. Export volume is also expected to decline for soybeans, tobacco, and vegetable oils.

Some of the major factors affecting U.S. export prospects this year are:

- Reduced wheat production and export activity in Australia and Argentina.
- The second consecutive poor grain harvest in the USSR.
- A decline in Chinese grain production and subsequent increases in total Chinese grain imports.
- The continued slow economic recovery in potential foreign markets.

U.S. agricultural imports are expected to rise more than $1 billion to $18.5 billion in fiscal 1981. Primarily responsible for this anticipated increase are sugar imports, which may rise 8 percent in volume and 80 percent in value.

Even with record imports, the U.S. agricultural trade surplus should be larger than ever. USDA trade analysts are forecasting a surplus of around $30 billion, up $7 billion from last year and $14 billion from 2 years ago.

Another Export Record in Prospect

	1980	1981 forecast
	billion dollars	
Grain and feed	18.7	24.2
Oilseeds and products	10.0	12.2
Cotton, including linters	3.0	2.2
Tobacco	1.3	1.4
Fruits, nuts, and vegetables	2.7	3.0
Sugar and tropical products	0.9	1.1
Livestock products	3.1	3.6
Dairy products	0.2	0.2
Poultry products	0.5	0.6
Total[1]	40.5	48.5

[1] Totals may not add due to rounding.

China's Prolific Pigs

China is high on the hog.

Pork accounts for about 90 percent of the red meat consumed by the Chinese. In the U.S., where beef is the leader, pork accounts for only 38 percent of meat consumption.

"Hogs are significant contributors to diets and cash incomes of rural commune families in China," says USDA's Roy Van Arsdall, a recent visitor to China.

To meet burgeoning food needs, China plans to double pork consumption by 1985. The goal is to boost consumption to 34 pounds per capita by 1985, according to He Kang, vice chairman of China's State Agricultural Commission. That's about half the current U.S. level of 65 pounds per person.

To achieve this, the 40 economically important breeds of native hogs will make the difference. Prolific is the key characteristic of these breeds. Crossing them with modern breeds, such as Russian Large Whites, Danish Landraces, and American Yorkshires and Hampshires, should cause China's hog production to soar.

One of China's record winners is the Erhualian, known as the "prolific pig." The animal lives up to its name—reaching sexual maturity by 4 months, having a first service conception rate of 90 to 95 percent, and giving birth to 13 to 15 piglets or more per litter.

No beauty contest winners, these hogs have sway backs and pendulous bellies—a result of diets deficient in the nutrients needed for skeletal development. Nevertheless, they can nurse unusually large litters.

Breeds like the Erhualian are distinctly different from the average U.S. variety which reaches maturity in 6 to 7 months, has a first service conception rate of 75-80 percent, and averages 9 to 10 pigs per litter.

According to Van Arsdall, U.S. producers and animal scientists have shown some interest in these prolific animals. Plans to introduce semen or embryo transplants from the ancient Chinese breeds might lead to a U.S. super pig, provided U.S. and Chinese authorities can agree on adequate animal health safeguards.

Poland a Top Customer

Poland is expected to once again be the top East European customer for U.S. agricultural goods this fiscal year.

Last year, our farm sales to Poland reached a record $638 million, of which $563 million was in loans through the Commodity Credit Corporation (CCC). Exports of corn, the leading sales item, were valued at $316 million. Soybean meal sales totaled $91 million, soybean sales $84 million, and wheat sales $41 million.

The next largest East European importers of U.S. farm goods were East Germany, with purchases totaling $493 million, and Romania, with sales reaching $468 million.

For fiscal 1981, Poland has been granted the largest CCC credit line in history—$670 million—and the Polish government is seeking an additional $200 million.

Looks aren't everything. Chinese pigs produce record litters.

Reports in the News

To order the reports listed on this page, please write to ESS Publications, Room 0054 South Building, USDA, Washington, D.C. 20250 or call (202) 447-7255. Publications available from other sources are indicated. Please ask for publications by title and report number (in parentheses). Single copies are free of charge, but supplies are limited.

Gasohol's Potential

Alcohol fuels have emerged as important candidates in meeting the nation's shortage of liquid fuels. Their best known use is in gasohol, a mixture of gasoline and ethanol, an alcohol fuel derived from the fermentation of sugars.

Corn is now the most widely used feedstock in ethanol production, but future conversion technology is expected to make use of other agricultural and nonagricultural products.

The production of ethanol for use in gasohol could expand significantly, given the level of federal and state subsidies and the expected increases in petroleum prices. However, gasohol production is constrained in the short run by limited alcohol plant capacity.

If gasohol production keeps rising, it could lead to increased prices for corn. The competition with fuel producers for grain could further increase livestock producers' costs.

At high levels of alcohol production (2 billion gallons a year), corn consumption in the U.S. would increase by about 12 percent, corn exports would fall by about 5 percent, and corn stocks would fall by 15 to 20 percent. Corn prices would increase by about 12 percent.

***Gasohol: Prospects and Implications** (AER-458), by Ronald Meekhof, Mohinder Gill, and Wallace Tyner.*

Wide-Ranging Chartbook

USDA's new chartbook is packed with around 300 easy-to-understand charts and tables covering everything from farm finances to agricultural trade to food marketing costs.

Readers tell us it's particularly valuable for trend analysis, speeches, and seminar or classroom use.

Sections include: The Farm, Population and Rural Development, The Consumer, Food and Nutrition Programs, U.S. Trade and World Production, and Commodity Trends.

***1980 Handbook of Agricultural Charts** (AH-574).*

Focus on Rural America

During the 1970's, rural America underwent important changes, including improved employment opportunities, a reversal of the population flow to the cities, and much needed advances in housing and community services.

Change brought some benefits to rural communities, but some problems as well.

Rising energy costs hit rural Americans particularly hard because of the open spaces and distances of travel, agricultural fuel needs, and dependence on expensive heating oil and bottled gas.

What were once considered urban social problems also started showing up with increasing frequency: child and spouse abuse, teenage pregnancies, marital conflict, alcohol and drug abuse, juvenile delinquency, and serious crime.

Rural Development Perspectives, a quarterly USDA report, deals with the opportunities and problems facing rural America in jobs, education, medical care, and housing.

It translates the latest social science research into articles useful in forming public policy for rural people and communities.

The latest issue focuses on rural youth and discusses the greater range of opportunities for future growth and development; the role improved education can play in reducing rural-urban, black-white, male-female differences; the seriousness of youth unemployment; and the need for proper medical attention to rural youth.

***Rural Development Perspectives** (RDP-3), by Donald Steward, Focus on Rural Youth.*

Year-Round Crop and Livestock Figures

USDA's Crop Reporting Board publishes 150 crop and 50 livestock reports providing production and stocks estimates throughout the year. There are also reports on farm prices, farm labor, farm numbers, and other topics.

The 1981 catalog includes a calendar of release dates, a summary of each report's contents, and information on how to order the statistical reports issued from Washington, D.C., and your state office.

***Crop Reporting Board Catalog.** Order from the Crop Reporting Board, Room 0005-South, USDA, Washington, D.C., 20250.*

Burley Tobacco Profile

The typical burley tobacco farmer produces only a few acres of tobacco and relies heavily on off-farm income, according to a USDA study of 65 Kentucky and Tennessee counties in the heart of the burley tobacco belt.

The farms in the study averaged 86 acres of land but only 2.4 acres of tobacco. More than two-thirds of the growers produced 2 or fewer acres of tobacco—largely because of quota restrictions.

An average of 23 acres per farm was planted to other crops, primarily hay and corn, and two out of three farmers also produced some livestock.

The typically small acreages limited farm earnings, so it wasn't surprising that almost 70 percent of the farm households reported that one or more family members held outside jobs. About 55 percent of the operators and 26 percent of their spouses worked off the farm.

In part because of the small acreages, harvest mechanization has not progressed in burley tobacco as it has in flue-cured. Without substantial quota consolidation to enlarge acreages, the investment per acre required for mechanization has made manual labor more cost efficient.

However, labor costs have been rising rapidly—30 percent from 1976 to 1979—so changes over the next decade may be greater than during the last three, the study says. Other uncertainties include the future impact of the continuing campaign against tobacco use.

***Burley Tobacco Farming Characteristics and Potential for Change** (AER-460), by Verner N. Grise and Owen K. Shugars.*

Supporting Dairy Prices: A Question of Balance

Although 1980 was a disappointing year for many farmers, nearly everything increased in the dairy sector—production, prices, and profits. Only consumption decreased slightly.

Milk prices averaged 9 percent higher than in 1979—ordinarily an indication of smaller supplies or increased demand.

Milk production rose 3½ percent to 128 billion pounds, beating the 1964 record. Cash receipts from marketings of about 125.5 billion pounds boosted dairy farmers' gross annual income by 11 percent.

Continued favorable returns encouraged expansion. At 10.82 million cows, the U.S. dairy herd averaged slightly larger than in 1979. Output per cow also increased—up 3 percent for the year.

Retail prices were up 10 percent even though consumer expenditures for dairy products—after adjusting for inflation—rose only slightly and commercial use declined by 1.4 percent.

Price Supports

These circumstances resulted in part because of several government programs, of which the price support program is most visible. The objective of this program is to assure consumers an adequate supply of dairy products at reasonable prices while maintaining the productive capacity of the industry.

Since the enabling dairy legislation, the Agriculture Act of 1949, was passed, the government has supported dairy prices at 75 to 90 percent of parity. The current price support—80 percent of parity—was set by the Agriculture Act of 1977, as amended. This level was chosen in an attempt to protect dairy farmers from the dramatic income swings of the prior decade.

In 1974, net income for a 48-cow herd dairy farm averaged only $4,842—below the poverty level for a family of four ($5,038). But since the 1977 farm act, things have been better. Last year, the average net dairy income for farms with 54-cow herds was $28,983.

But 1977's legislation, requiring an 80 percent support level, expires this year and, at the discretion of Congress, it could be extended, adjusted, or completely rewritten.

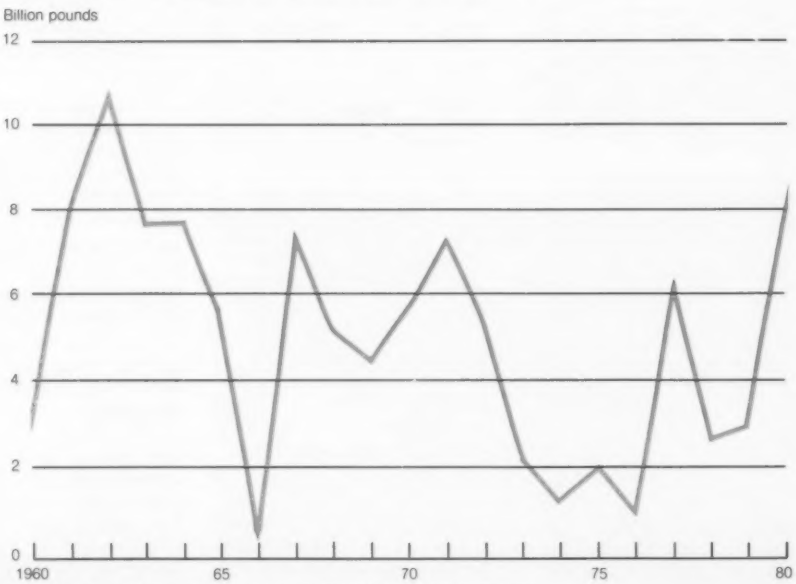
What Next?

What happens in the future will be an important and volatile agricultural issue for the 97th Congress. Some change seems likely. But a congressional examination will no doubt come face to face with the competing interests of dairy farmers, consumers, and other taxpayers, particularly in view of current concerns over inflation, federal spending, and the economic well-being of all American farmers.

Overall, the price of milk is influenced by a number of government programs and policies—federal milk marketing orders, dairy price supports, restrictions on imports, and policies toward cooperatives.

But past and prospective federal costs—$1.3 billion in fiscal 1980 and about the same this fiscal year—will very likely keep price supports at the center of attention.

USDA Dairy Price Support Purchases Highest in 18 Years



Figures are for net removals, milk equivalent, fat-solids basis. 1980 estimated.

The 1949 act requires the Secretary of Agriculture to set a nationwide support price for manufacturing grade milk that is between 75 and 90 percent of parity. Present law requires a minimum of 80 percent.

USDA's Commodity Credit Corporation (CCC) attempts to stabilize prices by purchasing dairy surpluses off the market—as specified in the 1949 act—and, when needed, by making sales back to industry.

The CCC offers to pay processors a specific price for three manufactured products—nonfat dry milk, butter, and American cheese. Theoretically, the CCC's price allows processors to pay the announced support price to farmers.

However, present legislation doesn't require processors to pay the support price. Under conditions like last year's—large milk supplies and weak demand—the farm milk price may be below the support level for at least part of the year.

The price support program has dominated other dairy programs, particularly during the last 10 years. According to Emerson Babb and Robert Boynton of the Agricultural Economics Department at Purdue University, most price changes under the federal milk marketing orders were triggered by USDA's support price actions.

Some Alternatives

Although major revisions of dairy legislation may be discussed, Congress may focus on the minimum levels of price support. Four alternative levels—75, 80, 85, and 90 percent of parity—may be examined.

All four have significantly different effects on cash receipts and net income to dairy farmers, on consumer spending for dairy products, and on federal expenditures. Choosing a support level is essentially a question of achieving a balance among these factors.

A 1979 Congressional Budget Office (CBO) study examined the effects of four alternate levels of parity. Not surprisingly, the study found that 90 percent of parity offered the highest income to farmers, but implied high retail prices and high federal budget costs. It also found no historical evidence that greater price stability—a major goal of the dairy price support program—would be achieved with the highest level of support.

One study reported that consumers spent a lot more than if there had been no price supports but also got fairly stable prices and uninterrupted supplies.

The CBO study noted that continuing at the current level—80 percent of parity—would probably result in no major change in dairy farmers' real income or in dairy prices.

However, it suggested that returning the minimum to 75 percent would place downward pressure on both income to dairy farmers and retail dairy prices. The probable reduction in CCC purchases could deplete government stocks rapidly, and more imports would be required for continued price stability.

Steadily Rising Prices

Dairy price supports have held a wide influence on the market and affected the milk prices received by all dairy farmers. From 1950 to 1975, milk prices paid to farmers increased an average of 7 percent every year, according to the CBO study.

The study also reported that consumers spent an estimated $400 million a year more on dairy products than they would have if there had been no price supports. And taxpayers paid an average $247 million every year to cover the cost of the CCC's purchases, which were about 4 percent of annual U.S. milk production.

But, in return, U.S. consumers received fairly stable milk prices and uninterrupted supplies of dairy products.

Cows naturally produce more milk in the spring and summer when they are at pasture than during fall and winter when they are confined and fed in barns. But in the fall and winter, when children are in school, consumption is at its highest. So, if milk production is geared to meet October's demand, excesses will flood the market in May.

In the early 1900's, this haphazard supply system resulted in dramatic swings in both farm income and retail prices. However, it also prompted the government intervention in dairy pricing that became the basis for dairy legislation.

Few would disagree with the dairy program objectives—a year-round milk supply, stable prices, and profitable income for milk producers. But there's a key question that's almost certain to be asked in any debate over continuing or altering current dairy legislation. That question is whether these objectives can be met today at lower retail prices and reduced government spending.

U.S. milk production is likely to set its second consecutive record this year, with growth somewhere between 1 and 3 percent.

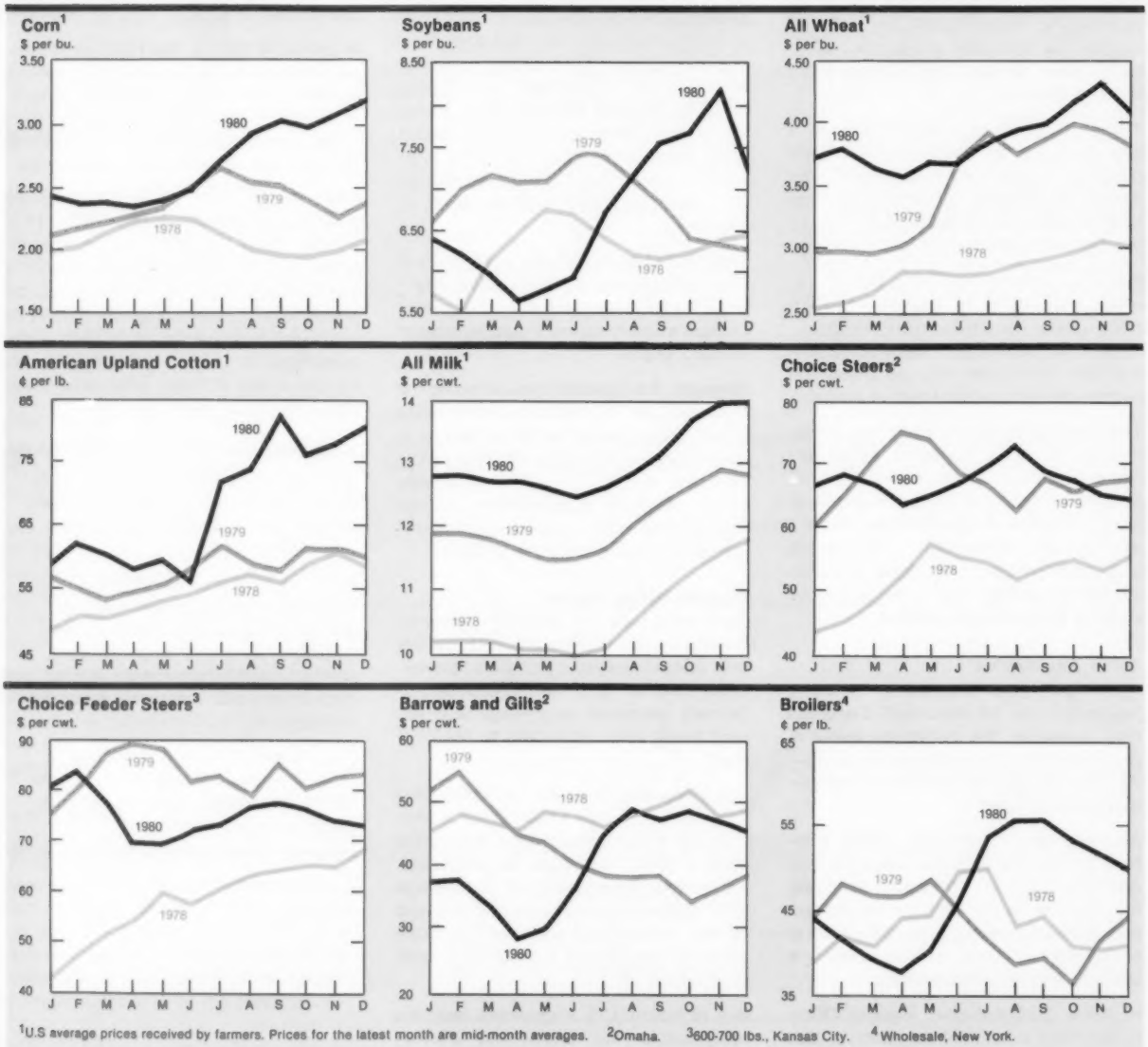
Milk cow numbers are almost certain to be above year-earlier levels as plenty of replacement animals are available. Even if culling increases from present levels, there's a good chance last year's dairy herd can be maintained.

Less favorable milk prices relative to feed prices will limit gains in concentrate feeding—which could limit gains in output per cow.

Farmline Trends

Monthly Price Monitor

The December slump in commodity prices affected most crop and livestock items. Soybean prices tumbled, falling almost a dollar after topping $8 per bushel in November, the highest price since May 1977. Choice steer prices remained below those of a year ago after dropping to just over $65 per cwt. in November, while prices for New York broilers fell nearer year-ago levels. But cotton edged above 80 cents a pound for the second time this year, milk prices continued strong at $14.00 per cwt., and corn was still rising steadily as of mid-December.

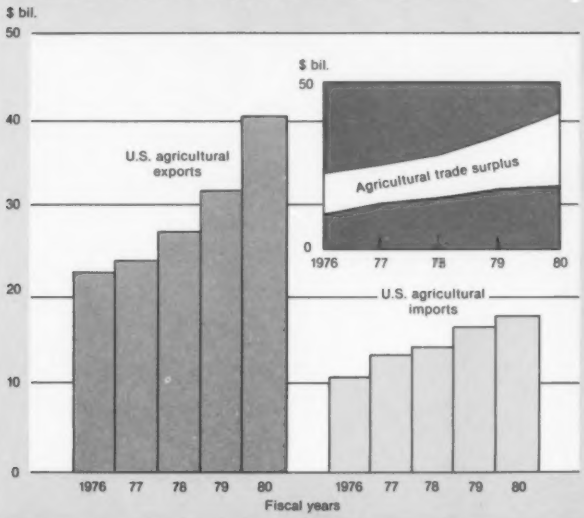


[1]U.S average prices received by farmers. Prices for the latest month are mid-month averages. [2]Omaha. [3]600-700 lbs., Kansas City. [4]Wholesale, New York.

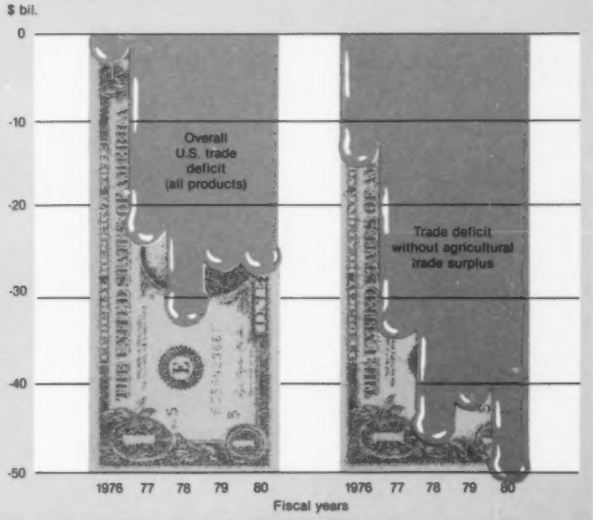
Adding Up Farm Export Earnings

U.S. agricultural exports of $40.5 billion and imports of $17.3 billion in fiscal 1980 left a record $23 billion surplus, which helped offset purchases of foreign oil, automobiles, and other imported nonfarm products. Without the farm export surplus, the overall U.S. trade deficit would have been $51 billion. Half of U.S. agricultural export earnings came from sales to 1980's top eight farm markets, with Japan the leading buyer. Last year's best-selling export commodities —led by corn—brought in 70 percent of our farm earnings from abroad.

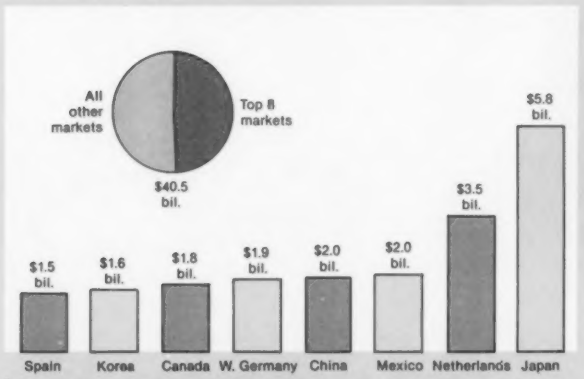
Exports of U.S. Farm Products Outpace Imports by a Widening Margin, Resulting in a Growing Agricultural Trade Surplus



. . . Without that Surplus, the $28 Billion U.S. Trade Deficit Would Have Been $51 Billion in 1980

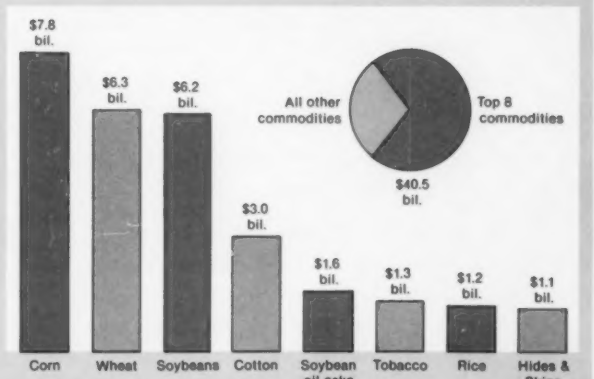


Half of U.S. Agricultural Export Earnings Came from Sales to 1980's Top Eight Foreign Markets[1]



[1] Not adjusted for transshipments through the Netherlands; adjusted for Canadian transshipments.

. . . 1980's Eight Best-Selling Export Commodities Brought In 70 Percent of Our Farm Sales Receipts from Abroad



U.S. DEPARTMENT OF AGRICULTURE
ECONOMICS AND STATISTICS
SERVICE

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE $300

To stop mailing ☐ or to change your address ☐ send mailing label on this magazine and new address to ESS, Rm. 505 GHI, USDA, Washington, D.C. 20250

POSTAGE AND FEES PAID
U.S. DEPARTMENT OF
AGRICULTURE
AGR 101
BULK THIRD CLASS

U.S.MAIL

Coming Up In Months Ahead:

- **Incorporating the Family Farm**
- **Inflation and the Farmer**
- **Concentration in the Pesticides Industry**
- **The Growing Mexican Market**